Public Health Workforce Development Implementation Plan

A Global Life-Long Learning System: Building a Stronger Frontline Against Health Threats, Phase I
June, 2001

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PREFACE

The Centers for Disease Control and Prevention (CDC), the Agency for Toxic Substances and Disease Registry (ATSDR), and our partners believe that the people who practice public health are public health's greatest resource. The health of our communities is dependent upon the expertise of physicians, nurses, environmentalists, health educators, laboratorians, program managers and support staff – the approximately 448,254 health professionals who make up the national public health workforce. Currently available information indicates that the public health workforce is under-prepared, through either work experience or formal training, to meet the complex demands of current and future public health practice. The *Public Health Workforce: Enumeration 2000* reports a significant decrease in the ratio of public health workers per population served since the 1970's[1]. Considering the new and emerging health threats of the last decades, this change represents a substantial erosion of public health capacity.

Over the past two years, CDC/ATSDR has spearheaded efforts to build momentum for a cohesive national and global approach to public health workforce development. The *CDC/ATSDR Strategic Plan for Public Health Workforce Development (1999)*, prepared in collaboration with the Health Resources and Services Administration (HRSA), other federal, state, local and academic partners, outlined six broad strategies that could be used as a "blueprint" to invest in the capacity of the public health workforce. On November 1 - 2, 2000, a broader network of federal, state, local and academic partners gathered at an Expert Panel Workshop in Callaway Gardens, Pine Mountain, Georgia, to initiate the development of an action agenda for strengthening the public health workforce. Although the workshop was not designed to achieve consensus, key areas of convergence are emerging as a result of that rich dialogue.

The *Global and National Implementation Plan for Public Health Workforce Development* is a phased strategy to operationalize a vision of a global learning enterprise for public health practitioners: founded in sound science, facilitated by learner-oriented information technology and integrated into existing public health learning and practice settings. A well designed plan must be iterative in nature and guided by current and emerging public health threats facing communities, significant changes in workforce composition and the diversity of the public health partners. The proposed three-phase approach outlined below provides an opportunity to address these important determining factors:

- Phase I - Broadly outlines CDC/ATSDR-specific responsibilities and builds on existing infrastructure including the Public Health Training Network (PHTN) and the recently funded Centers for Public Health Preparedness (CDC/ATSDR) and HRSA Public Health Training Centers.

[1] Health Resources and Services Administration (HRSA), Bureau of Health Professions, National Center for Health Workforce Information and Analysis. *The Public Health Workforce, Enumeration 2000*. Washington, DC: HRSA, 2000

- Phase II - Will focus on working with key partners to build workforce development capacity at state and local levels.

- Phase III - Will further expand the partnerships needed and foster greater integration of activities for national and global implementation.

The landmark "Frist-Kennedy Infrastructure law" signed in November 2000 recognizes that many communities are unprepared to deal with health threats and that the underlying public health infrastructure must be strengthened. This law will significantly contribute to halting the erosion of public health systems by establishing voluntary performance goals for health systems; providing resources to state and local public health agencies to develop assessment and improvement plans; and establishing grant and technical assistance programs to enhance capacity at the state and local level. Workforce development is recognized as an integral component of achieving this improvement in public health capacity.

We are committed to strengthening the frontlines of public health and building workforce competency to perform essential services. We look forward to working with our many partners throughout the nation and the world in a phased approach to full implementation of a global life-long learning system. Getting to action will require broad-based collaboration to assure appropriate resources, synergy, and shared accountability.

Sincerely,

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INTRODUCTION: STRATEGIC ELEMENTS, OBJECTIVES AND ACTION STEPS

The health of our communities depends upon the competence of the national public health workforce - an estimated 448,254 physicians, nurses, environmental health scientists, laboratorians, health educators, epidemiologists, managers and support staff – working at the frontlines of public health throughout the country. This workforce is unevenly prepared to perform the essential functions deemed most critical to the public's health – preventing epidemics and injuries, protecting against exposures to environmental hazards, responding to disasters, promoting healthy behaviors and assuring access to quality health services. Many of the nation's frontline public health workers lack formal training in public health (1). Of primary concern is data suggesting that 78% of the 3,000 public health officials in leadership positions nationwide lack graduate level public health (2). It is also significant that nearly 52% of public health nurses lack baccalaureate-nursing education, which provides some foundation in community health (3). Only an estimated 23% of environmental health training needs are being addressed (4). A recent enumeration of public health workforce indicates a decreased ratio of public health workers per population served since the 1970's (5). Considering the new and emerging health threats of the last decades, this change represents a substantial erosion and fragmentation of public health capacity. Despite more than a decade of dialogue on the critical needs and challenges in public health workforce development, progress remains slow in implementing recommended actions.

The need for an integrated system to assure a stronger public health workforce was addressed in the 1997 report, *Public Health Workforce: An Agenda for the 21st Century,* which identified five areas for action: national leadership, state and local leadership, workforce composition, curriculum development, and distance learning (6). Then, for the first time, *Healthy People 2010* identified objectives to bolster the nation's public health infrastructure (7). Prominently included are the following three objectives that provide direction for national public health workforce development:

1. **Incorporate specific competencies in the essential public health services into local, state, federal and tribal agency personnel systems;**

2. **Integrate specific content on the essential public health services into schools and programs of public health curriculum; and**

3. Provide continuing education on essential services to workers.

Over the past two years, the Centers for Disease Control and Prevention (CDC) and the Agency for Toxic Substances and Disease Registry (ATSDR) spearheaded efforts to stimulate the development of a global and national plan for public health workforce development which would build on partner efforts, support *Healthy People 2010* objectives and facilitate alignment of CDC/ATSDR training/continuing education programs targeted to frontline worker preparedness. Appendix A - Historical Perspective on Public Health Workforce Development - provides a description of the

major activities which laid the foundation for the global and national implementation plan outlined in the following pages. The plan uses six strategic elements as organizing principles to depict a
systems approach for assuring a competent workforce prepared to deliver essential services (Figure 1). An "at a glance"overview of the implementation plan is presented in Table 1. The implementation plan is designed to be a dynamic document where the vision, guiding principles and strategic elements remain constant while the objectives and related action items can change as needed based on workforce needs and trends.

There are significant obstacles to overcome in formulating a national plan:

- **Data on the composition and distribution of the workforce is inconsistently gathered.**

- **Agreement on basic and crosscutting public health competencies required for frontline preparedness remains elusive.**

- **Technology-supported learning systems are not integrated; there is no universally accessible, interoperable infrastructure; and systems lack uniform operational strategy, are unable to be technically integrated and are not user-friendly.**

- **Incentives for participation in life-long learning are inadequate; there is no uniform framework for certification and credentialing in public health.**

- **Research and evaluation data on workforce issues is limited.**

- **Financing is hampered by an absence of a coherent policy framework and strategies for funding workforce development.**

The objectives and action items address each of the obstacles listed. In addition, strategies for assuring coordination and accountability are described.

A basic premise of this framework and phased approach is to provide on-going dialogue and iterative refinements of the plan with a broad array of partners.

STRATEGIC ELEMENT 1: MONITOR WORKFORCE COMPOSITION AND PROJECT FUTURE NEEDS

A systematic, ongoing monitoring of public health workforce composition using standard data definitions (i.e., standard occupational classifications and uniform practice setting descriptions) is the foundation for any national workforce effort, including *Healthy People 2010* objectives 23-8,9,10 (7). Formal estimates of the national public health workforce have not been undertaken since the early 1980s. Data collection at the state level has been sporadic and inconsistent. In addition, future needs and changes in workforce composition should be informed by trends in public health practice. The Health Resources and Services Administration (HRSA) intends to serve as the lead federal agency in assessing the size, composition, distribution and characteristics of the public health workforce. In 1999, the *CDC/ATSDR Strategic Plan for Public Health Workforce Development* affirmed the need for collaboration between HRSA and CDC/ATSDR in improving workforce monitoring and forecasting (8).

In FY 2000, HRSA funded a study to provide an accurate estimate of the number and job category of currently employed public health workers. The study findings were summarized in *The Public Health Work Force-Enumeration 2000 (5)*, which was based on existing workforce reports, summaries, and surveys collected from state and local public health authorities in 57 states and territories. The data includes information on public health workers in eight occupational categories and 55 occupational titles. The current "best estimate" is 448,254 persons in salaried positions. (This figure does not include professionals from community-based organizations, hospitals, private physicians and others who do surveillance, specialize in hospital infections prevention and other important work related to public health.) This represents a ratio of one public health worker for every 637 persons, a decrease from a 1970's ratio of one to every 457. This change represents a substantial erosion and fragmentation of public health capacity.

HRSA and CDC/ATSDR collaborated in funding the Public Health Leadership Society (PHLS) Enumeration Project to investigate stakeholders' perception on the value of enumeration and how to effectively obtain useful data. The report of the (PHLS) Enumeration Project, scheduled for completion in February 2001, focuses on the policy and stakeholder issues related to enumeration. The transition from these preliminary efforts to

action and implementation of periodic systematic enumeration of the public health workforce presents a leadership opportunity for HRSA, CDC/ATSDR and the practice community, and will require the efforts of experts in workforce enumeration. The lack of accurate enumeration data should not hamper action in other strategies.

Objective 1A:
By (DATE), HRSA in collaboration with CDC/ATSDR and other partners will develop an action plan for periodic enumeration of the public health workforce.

Action Item 1A-1:
By (DATE), a work group will be named to develop an action plan for enumeration of the public health workforce. This effort will be led by HRSA with the support of CDC/ATSDR. The work group will include experts from key constituent groups (i.e., ASTHO and its affiliates, National Association of County and City Health Officials (NACCHO), National Association of Local Boards of Health (NALBOH), the academic community and federal officials). It is recommended that HRSA continue to gather enumeration data from secondary sources until new methodologies are established.

Action Item 1A-2:
By (DATE), building on recommendations from the (PHLS) Enumeration Project and other research activities, the work group will identify next steps that can be achieved in one to three years.

Action Item 1A-3:
By (DATE), HRSA in collaboration with other partners will develop strategies for communicating the benefits of enumerating the public health workforce to the constituents at the federal, state and local level.

Objective 1B:
By (DATE), HRSA, CDC/ATSDR and other partners will promote consistent use of public health workforce terminology in data collection.

Action Item 1B-1:
By (DATE), HRSA, CDC/ATSDR and other partners will collaborate in updating the Standard Occupational Classifications used by the Department of Labor so that maximum information can be obtained on the public health workforce through the Standard Industrial Classification survey process.

Action Item 1B-2:
By (DATE), HRSA in collaboration with CDC/ATSDR and other partners will develop a

data dictionary for use in surveys of the public health workforce so as to promote comparability of data collected.

Objective 1C:
By (DATE), HRSA, CDC/ATSDR and partners will analyze available data sources for workforce trends and developmental needs.

Action Item 1C-1:
By (DATE), HRSA, CDC/ATSDR, academic partners, practice community and other stakeholders will obtain available workforce development needs data which may have been collected at the state, regional, local or academic setting to identify common themes and trend information for planning. The Association of Schools of Public Health (ASPH), the Association of Accredited Public Health Programs and other stakeholders will assist in the collection and analysis of this information. (Examples of data needed are described in the PHLS report to HRSA scheduled for delivery February 2001.)

STRATEGIC ELEMENT 2: IDENTIFY COMPETENCIES AND DEVELOP CURRICULUM

The expert panel at Callaway Gardens was charged to develop a public health practice-focused curriculum model that defines basic and crosscutting competencies. This model would identify the individual competencies that underlie organizational capacity to deliver essential public health services regardless of practice setting and form the foundation for effective delivery of technical and categorical programs. The panel was asked to evaluate urgent needs, consider promising approaches and identify priorities for action.

The responsibility for competency identification and validation in public health is ongoing and requires input from a broad range of partners. Professional disciplines (i.e., medicine, nursing, environmental health, health education) will continue to define competencies and related training needed for specific types of practice. Academia, other federal, state and local agencies, and associations will continue to provide training and continuing education

based on needs assessments. To achieve measurable impact, all of these activities must build on a sound foundation of core/crosscutting competencies. The Council on Linkages is completing a project which can serve as a starting point for a competency framework. (Appendix B)

The implementation plan (Phase I) calls for funding a national system of Centers for Public Health Preparedness aimed at translating public health science into practice at the frontline. These centers include academic, specialty and local exemplar sites. The long-term goal is to create a network of centers in support of CDC/ATSDR's prevention programs, in general, and bioterrorism/emerging infectious disease, in particular. Key activities of the centers are development of practice-focused curricula, technology-supported learning delivery, certification and credentialing and applied research and evaluation. These centers will complement other CDC/ATSDR-funded centers (i.e., Prevention Research Centers, National Institute for Occupational Safety and Health (NIOSH) Education and Research Centers (ERC), HIV/STD/TB, Injury) and the recently funded HRSA Public Health Training Centers.

The development and dissemination of a curriculum model based on core public health competencies are first steps in improving alignment and coordination of training and continuing education for frontline preparedness. Simultaneously, public health agencies and their community partners must become learning organizations so as to improve organizational effectiveness and create a climate of life-long learning for employees.

<u>Objective 2A</u>: By 2003, CDC/ATSDR will establish a national system of 15 academic, specialty and local exemplar sites to assure a competent domestic public health workforce.

<u>Action Item 2A-1:</u> By 2001, CDC/ATSDR will establish, through a cooperative agreement with ASPH, four academic Centers for Public Health Preparedness located at schools of public health. (Information on the newly established centers is included in Appendix E.)
Note: Action Item 2A-1 Completed 10/27/00.

<u>Action Item 2A-2:</u> By 2001, CDC/ATSDR will integrate existing specialty and local exemplar Centers for Public Health Preparedness into the national system of Centers for Public Health Preparedness and continue planning development of two specialty-focused centers (i.e., public health nursing and maternal/child health).

<u>Action Item 2A-3</u>: By 2002, CDC/ATSDR proposes to add six academic Centers for Public Health Preparedness, through a cooperative agreement with ASPH.

<u>Action Item 2A-4</u>: By 2003, CDC/ATSDR proposes to reach its goal of at least 15 Centers for Public Health Preparedness.

<u>Objective 2B:</u> By (DATE), CDC/ATSDR and public health partners will develop and disseminate curriculum models and learning resources based on core public health competencies and linked with national public health organizational capacity/performance standards.

<u>Action Item 2B-1</u>: By May 2001, working with the Council on Linkages, partners will identify a set of core competencies (See Appendix B) for public health from which to develop a basic public health practice curriculum.

<u>Action Item 2B-2:</u> By 2002, CDC/ATSDR, HRSA in collaboration with public health partners in the academic and practice communities will link competencies to curriculum options/learning resources for specific target audiences. A guiding principle is to build on existing resources and partnerships, e.g. Public Health Foundation (PHF), Centers for Public Health Preparedness, Public Health Workforce Collaborative, state/local regional programs.

<u>Action Item 2B-3:</u> By 2002, public health partners will disseminate*and evaluate curriculum models and learning resources based on core public health competencies. ***(*Note dissemination via Internet is anticipated.)***

<u>Objective 2C:</u> By (DATE), public health partners will identify factors which support adoption/use of competency-based curricula on essential services by public health agencies.

<u>Action Item 2C-1:</u> By June 2001, public health partners (i.e., ASTHO and its affiliates, NACCHO, PHF, and NALBOH) will initiate discussion to develop strategies to educate public health leaders about the interrelationships between workforce competency, organizational climate (i.e., learning organization model) and organizational capacity to deliver essential services.

STRATEGIC ELEMENT 3: DESIGN AN INTEGRATED LEARNING SYSTEM

For more than a decade, public health-related organizations have struggled with the challenges of developing and enhancing competencies of their workforce. Competing demands on time, energy, and budget have kept many from training needed to remain current in their profession-related fields.

There has been growing recognition and acceptance of distance learning as one practical strategy for meeting the overwhelming training needs of the public health workforce. As organizations have moved forward deploying infrastructure of their own, they have not necessarily considered how their choices would be integrated within their organizations or with other partners in the public health arena. As a result, a variety of unique approaches and sometimes unconnected technologies are deployed.

Real challenges exist as national partners begin to work together to further workforce development through technology-supported learning strategies. The following summarizes what needs to be done:

- **Develop a uniform leadership commitment to promoting and uniting distance learning activities/efforts throughout the public health community.**
- **Create technical standards for distance learning systems, and a plan for operating such a system.**
- **Foster a true distance learning community of interest.**
- **Create real incentives for organizations to work together in the field of distance learning.**
- **Launch a centralized place where learners can find out what programing is available, and how they can get to it.**
- **Coordinate and improve distance learning production.**
- **Leverage and optimize existing expertise, experience and telecommunications infrastructure.**
- **Develop a framework for evaluating learners, programs and systems.**

The following objectives and action steps will:

- **Establish operating principles and technology standards developed by leadership.**
- **Produce on a global and national scale, a public health life-long learning system supported by interoperable technology.**
- **Disseminate best practices and benchmarks for design, development and delivery by all partners.**
- **Use a strategy for decentralized learning resource development throughout the public health system.**
- **Develop and adopt a method to deliver and keep current these resources in a seamless, easy to use learner/management system.**
- **Incorporate the Web as a universal delivery technology.**
- **Link all public health systems partners with their participants in the field.**

Several activities are already in process which support the objectives listed: HRSA/CDC/ATSDR Memorandum of Understanding; Department of Health and Human Services (DHHS) Report of the Public Health Council Distance Learning Working Group (October 2000); CDC/ATSDR/HRSA- sponsored annual Informatics and Distance Learning Conference; Public Health Training Network and CDC/ATSDR's revised online catalogue/registration/certificate system (i.e., "One-Stop Shop" system).

Technology is a moving target. Any approach to system development and standards must be flexible and able to accommodate cutting edge and basic users. Every effort should be made to accelerate the adoption/use of Internet-based learning so that public health can keep pace with changes in other industries and practice settings.

Objective 3A:
By (DATE), CDC/ATSDR and partners will build human and technical support and capacity for technology-supported learning at federal, state and local levels.

Action Item 3A-1: By 2001, CDC/ATSDR in collaboration with partners will develop a strategy to create a nationwide cadre of health educators/developers cross-trained in public health and learning technologies.

Action Item 3A-2:
By (DATE), CDC/ATSDR will collaborate with state and local partners to complete a baseline assessment of information technology and distance learning infrastructure needs of local public health systems.

Action Item 3A-3:
By (DATE), CDC/ATSDR will collaborate with public and private agencies to determine baseline data on availability and accessibility of learning opportunities for frontline public health workers (i.e., hardware/software, technical skills and resources).

Action Item 3A-4:
By 2001, CDC/ATSDR will expand the electronic learner support system to include an online "One-Stop-Shop" catalogue/registration system (including completion tracking, issuance of certificates and feedback on programs) for seamless integration with other partner systems. Specifically, this includes collaborating with PHF to enhance TrainingFinder.org.

Objective 3B:

By (DATE), CDC/ATSDR and partners will establish a governance structure, standards, guidelines and shared databases to enhance integrated global and national planning and operations for a life-long learning system for public health.

Action Item 3 B-1:

By 2001, CDC/ATSDR will assemble distance learning leaders from a variety of public health organizations and constituents (i.e., APHA, ASPH, ASTHO, NACCHO, NALBOH, PHF, Council of State and Territorial Epidemiologists (CSTE), and other state, local, federal and academic groups) to discuss governance/partnerships for operating a life-long learning system.

Action Item 3B-2:

By (DATE), CDC/ATSDR will convene and manage dialogue with public and private agencies to determine better ways to capitalize on existing learning systems' infrastructure and make plans to migrate to a single electronic Internet-based strategy. The common features of this future infrastructure would be driven by the vision of the Worldwide Web with universal broadened Internet capability and would include:

(1) Centralized electronic learner resources.
(2) Shared seamless learner support/management system.
(3) Surveillance/assessment measures.
(4) User-friendly interface.

Action Item 3B-3:

By (DATE), CDC/ATSDR and partners will establish a national monitoring and assessment body to work in partnership with state and local agencies, professional organizations and universities to collect and compile continuing education/participant data at the individual delivery unit and organizational levels for use in evaluation and planning.

Objective 3C:

By (DATE), CDC/ATSDR and partners will develop communications and marketing strategies to accelerate adoption/use/funding of technology-supported learning in public health.

Action Item 3C-1:

By 2001, CDC/ATSDR will work with public health partners to develop a marketing plan to promote technology-supported learning systems. (Ultimately, the use of the Internet will be the most likely universal delivery technique.) The target audiences include policy makers, educators and public health leaders.

Action Item 3C-2:

By 2001, CDC/ATSDR and HRSA will conduct the next conference on Informatics and Distance Learning in Public Health. The conference serves as an important venue to disseminate best practices and develop new strategies related to technology-supported learning. Please note, although this strategy focuses on technology-supported learning, a basic assumption is that the appropriate modality will be matched with the learning need.

STRATEGIC ELEMENT 4: USE INCENTIVES TO ASSURE PUBLIC HEALTH PRACTICE COMPETENCY

The public health workforce includes staff from a broad array of disciplines and educational backgrounds. It has been estimated that a high percentage of public health workers have no formal training in public health. In fact, public health is often described as a "practice setting," not a "profession," due to the variations in training and mix of professions performing public health functions. Assuring a competent workforce is considered an essential public health service.

Healthy People 2010 objectives 23-8 and 23-10 speak to the need for incorporating competencies in the essential public health services into personnel systems and for providing continuing education to develop competency in essential public health services for employees at the federal, tribal, state, and local level.

Currently over 40 bodies provide some form of credentialing that is used by staff in public health. Despite the broad array of certifications and credentials available, there are significant gaps and a lack of a cohesive framework for certifying competence for public health practice. There is a need for an inclusive framework in which competence in public health is assured. Such a framework would affirm that public health is a multi-disciplinary field and provide multiple pathways to certifying competency for practice. Expert panel members envisioned a framework with an emerging convergence on three levels of certification: basic, discipline-specific and integrator/leader. Operational definitions for each "level" will require additional dialogue among stakeholders. Preliminary discussions suggest that the basic or orientation level would be available for every public health practitioner completing a "core" practice-focused curriculum ("orientation learning experience"); discipline-specific certification would result from strengthening public health competencies within existing certification systems (i.e., medical specialty boards; other licensing or certifying bodies - health education, environmental health, etc.); and the integrator level would address the unique competencies required of public health system leaders.

Certification and credentialing systems are not the only incentives that can assure competence, but they are useful and powerful tool. Other incentives may include access to training programs, financial rewards, career development, etc. The unintended consequences of any incentive system(s) (certification, credentialing or other) must be carefully considered and strategies developed to ameliorate unintended negative effects. The need for ongoing dialogue by all partners on this important issue can not be overemphasized.

Objective 4A: By (DATE), CDC/ATSDR and partners will develop a multiple pathway framework for certification and credentialing public health workers at all levels.

Action Item 4A-1: By March 2001, CDC/ATSDR will establish a work group to be convened in June representing the practice, academic, and research community to develop a national framework for certification and credentialing in public health. The group will identify and describe multiple pathways to competence recognition in public health.

Action Item 4A-2: By September 2001, the work group will identify strategies and approaches to:

- Define and develop a basic public health orientation learning experience and ways to document that experience.
- Work with certification and accrediting professional organizations to integrate, strengthen and validate public health competencies through existing certification, accreditation and licensing mechanisms.

- Work with academic institutions and representative organizations such as the Schools of Public Health, the Council of Accredited MPH programs, Association of Accredited Programs of Public Health, the American Public Health Association, and the practice community on the development of crosscutting, inter-disciplinary accrediting strategies for public health leaders (those in public health with the role of "integrator").

Objective 4B: By (DATE), CDC/ATSDR and partners will identify factors which promote (or potentially inhibit) life-long learning behaviors.

Action Item 4B-1: By Quarter 4, 2001, CDC/ATSDR in collaboration with partners will identify incentives that encourage the growth of the public health practitioner wherever he/she serves. These incentives may include education and training opportunities and resources at the organizational or individual level. In addition, obstacles to life-long learning and unintended consequences of certification and credentialing systems should be identified.

Action Item 4B-2: By 2002, CDC/ATSDR and partners will develop strategies to address or support those factors and identify actions to implement those strategies.

Objective 4C: By (DATE), CDC/ATSDR and partners will identify factors which influence linkages between workforce competence and organizational performance.

Action Item 4C-1: By 2001, CDC/ATSDR will identify specific workforce development data elements to be included in the state, local and governance national performance standards instruments.

Action Item 4C-2: By 2002, CDC/ATSDR and partners will analyze results from workforce development components in state-based public health improvement plans as envisioned by the Frist-Kennedy Infrastructure Law to identify factors which influence linkages between workforce competence and organizational performance, etc. (Refer to Strategy 6 for additional information.)

Action Item 4C-3: By 2003, CDC/ATSDR and partners will develop strategies and set priorities to address those factors.

STRATEGIC ELEMENT 5: CONDUCT AND SUPPORT EVALUATION AND RESEARCH

"Establish a strong science base for workforce development policy and planning and conduct evaluation to assure continuous improvement of the life-long learning system."

Research and evaluation provide critical information for decision-making. While it is logical to assume that a competent workforce able to perform essential services contributes to organizational capacity to achieve health outcomes, evidence of the effects of workforce quantity (staffing levels and mix) and quality (professional education/credentialing) on performance of core functions is limited. Further, evidence from other areas of workforce research suggest that the effect of the workforce will be substantially modified by characteristics of the agencies in which individuals work; however, the science base to predict the nature and extent of such effects is substantially lacking. And finally, the research base needs strengthening to link improved performance and organizational productivity to improved health outcomes. Workforce is one component of a comprehensive public health systems research agenda. A framework for evaluation at the individual learner, program/curricula and system level is required to assure effective, relevant learning and continuous improvement.

The 1999 Taskforce report made four broad recommendations to CDC/ATSDR: (1) build capacity to evaluate and conduct research on workforce development; (2) adopt a framework for evaluation at individual, program and system level; (3) establish an agency-wide system to collect, analyze and report training evaluation data of CDC/ATSDR programs; and (4) support extramural research on competencies required for public health practice and on scientifically based approaches to workforce development. The expert panel provided additional guidance on next steps in building the science base for decisions in this area.

The "Frist-Kennedy Infrastructure Law" seeks to strengthen public health infrastructure by funding states to conduct organizational capacity assessments and develop improvement plans. It is critical to build these assessments and improvement plans on a sound scientific basis. Public health systems research is needed to assure that the investment in infrastructure improvement leads to improved preparedness and health outcomes. It is needed to attain our Nation's *Healthy People 2010* objectives and effectively deliver the essential public health services.

The following objectives are related to critical needs for capacity building, evaluation, agenda setting and partnerships. Since workforce is one component of a larger public health systems research

agenda, the action items represent only preliminary steps towards a more comprehensive plan for improving public health system performance.

Objective 5A: By (DATE), CDC/ATSDR and partners will develop a research agenda and methods to address public health workforce development issues.

Action Item 5A-1: By 2001, CDC/ATSDR in collaboration with academic, practice and federal partners will articulate a strategy for obtaining funding for public health systems research. For example, the Council on Linkages has recommended, as a first step, pilot testing a framework for developing a national public health systems research agenda guided by *Healthy People 2010* objectives and the essential public health services.

Action Item 5A-2: By 2001, CDC/ATSDR, HRSA with academic, state, local, private sector and community-practice partners will convene a work group to review research on the public health workforce, develop a theoretical framework for a workforce research agenda, and specify priorities.

Action Item 5A-3: By 2001, CDC/ATSDR in collaboration with partners including the Council on Linkages will facilitate formation of a special interest group for public health systems research to provide a forum for dialogue.

Objective 5B: By (DATE), CDC/ATSDR and partners will integrate evaluation strategies in key workforce development activities.

Action Item 5B-1: By 2001, CDC/ATSDR and HRSA in collaboration with academic partners and HRSA will establish an integrated evaluation framework to measure the effectiveness of both curriculum content and learning technologies in Centers for Public Health Preparedness and HRSA Public Health Training Centers.

Action Item 5B-2: By 2002, CDC/ATSDR propose to support evaluation studies of selected workforce development activities (i.e., PHTN and Centers for Public Health Preparedness).

Action Item 5B-3: By 2002, CDC/ATSDR in collaboration with HRSA, academic partners, and the practice community will prepare a report on the effectiveness of specific workforce development strategies in improving individual performance and job/career satisfaction of frontline public health workers.

Action Item 5B-4: By 2001, CDC/ATSDR will establish an agency-wide system to collect, analyze and report training evaluation data.

Objective 5C: By (DATE), CDC/ATSDR and partners will promote the development and evaluation of practice-focused curricula in schools and programs of public health and related academic programs.

Action Item 5C-1: By 2001, CDC/ATSDR will collaborate with ASPH to develop a strategy for obtaining baseline data to measure *Healthy People 2010*, Objective 23-9: "Increase the proportion of schools of public health workers that integrate into their curricula specific content to develop competencies in the essential public health services."

Action Item 5C-2: By 2002, academic partners, CDC/ATSDR, HRSA and the practice community will collaborate in planning how to increase the proportion of schools of public health and other academic institutions that integrate into their curricula specific content to develop competency in the essential public health services.

STRATEGIC ELEMENT 6: ASSURE FINANCIAL SUPPORT FOR A PUBLIC HEALTH LIFE-LONG LEARNING SYSTEM

A stable funding stream is an essential element in implementing a life-long learning system for public health. Most financial and human resources for public health workforce development derive from categorical/technical program funds. These efforts are frequently reduced when budgets are tight, or tied to specific categorical needs and cannot be carried over from year to year. Current funding mechanisms are not set up to support the wide-ranging business needs of a life-long learning system. CDC/ATSDR and the practice community have repeatedly expressed the critical need for flexible financing mechanisms which can support and sustain a workforce development strategy that affects multiple public health sectors, including interagency programs, public-private initiatives and multi-state and regional efforts.

The 1999 Taskforce Report (CDC/ATSDR Strategic Plan for Public Health Workforce Development) included three recommendations to assure financial support:

(1) Encourage grantees to pool funds from existing funding streams to support crosscutting workforce development and adopt policies enabling such integrated financing.
(2) Increase agency funding for crosscutting development by pooling funds from existing and new funding streams.

(3) Develop and support innovative approaches for funding workforce development, including leveraging funds across federal agencies and private foundations, encouraging coalitions among grantees and encouraging use of non-profit intermediaries.

During 2000, the following important steps were made by CDC/ATSDR and partners to address the need for stable funding to support crosscutting workforce development efforts:

- FY 02 New Budget Initiative - In June 2000, CDC/ATSDR submitted a budget request for additional funds (FY02-FY06) to strengthen frontline workforce preparedness. This public health workforce preparedness initiative would provide stable funding to establish a national system of Centers for Public Health Preparedness designed to link state and local health agencies and schools of public health and other academic and community partners. The centers will focus on the development of competency-based, practice-focused curricula for frontline public health workers, enhancing access to technology-supported learning, certification and credentialing of public health workers and applied research and evaluation. The proposal includes funding for ten comprehensive academic sites and five specialty-focused centers.

- HRSA and CDC/ATSDR Memorandum of Understanding (MOU) - On 9/16/00 HRSA and CDC/ATSDR established a Memorandum of Understanding related to public health workforce development for the 21st century. Although both parties have categorical programs that fund specific technical training, they agree that it would be mutually beneficial to develop common strategies for developing and funding training programs directed at competencies in basic and crosscutting public health core concepts. The purpose of the MOU is to formalize HRSA and CDC/ATSDR partnership in four broad categories: Policy and Legislation; Planning and Evaluation; Technology Systems and Workforce Development.

- **Public Health Threats and Emergencies Act (Frist-Kennedy Infrastructure Law)** - On November 13, 2000, the landmark, bipartisan bill, "A Public Health Threats and Emergencies Act," was signed. This bill introduced by Senators Frist and Kennedy recognizes that many communities are unprepared to deal with health threats and that the underlying public health infrastructure must be strengthened. Workforce development is recognized as an integral component of achieving improved public health capacity.

Objective 6A: By (DATE), CDC/ATSDR, HRSA and partners will secure a funding base for CDC/ATSDR and partner workforce development activities.

Action Item 6A-1: By (DATE), CDC/ATSDR and HRSA will work with partners (ASPH, ASTHO, NALBOH, NACCHO, Public Health Workforce Collaborative) to develop strategies for securing a stable funding base for preparing frontline public health workers.

Objective 6B: By (DATE), CDC/ATSDR and HRSA will implement a Memorandum of Understanding related to public health workforce.

Action Item 6B-1: By November 2000, CDC/ATSDR and HRSA will establish objectives, action items and a reporting system for documenting progress in implementing the MOU. (Action Item completed.)

Action Item 6B-2: By 2001, CDC/ATSDR and HRSA will convene an expert work group to provide these agencies with recommendations for assuring financial support for workforce/training activities. The Public Health Workforce Development Collaborative may be able to serve as the source for the work group.

Action Item 6B-3: By 2001, CDC /ATSDR and HRSA will support joint activities that model leveraging of funds to support workforce development, including but not limited to the Management Academy for Public Health and a focused activity to support public health nursing development.

Objective 6C: By (DATE), CDC/ATSDR and partners will link workforce development strategies with the implementation of the "Frist-Kennedy Infrastructure Law," specifically establishing a science base for organizational improvement plans to assure competent delivery of essential services.

Action Item 6C-1: Refer to action items included in Strategic Element 2 (2B, 2C). (Competencies/Curriculum); Strategic Element 4 (4C 2-3); and Strategic Element 5 (5A, 5B) (Research and Evaluation) for specifics.

COORDINATION AND ACCOUNTABILITY

To assure ongoing coordination and accountability, plans for governance, evaluation and communication must be developed. CDC/ATSDR will collaborate with partners to accomplish the following:

Objective 7A: Establish a governance structure for implementing the global/national public health workforce development plan.

Action Item 7A-1: By June 2001, establish and convene the following governing bodies:

- Senior Policy Committee - includes public health leaders and senior CDC/ATSDR representatives to advise on integrating the implementation plan for public health force development with state, local and federal public health priorities and CDC/ATSDR's global and national priorities.

- National Implementation Plan Coordination -

    1. Steering Committee - consists of chairpersons from expert panels; provides oversight and guidance on issues of science, policy and public health practice related to implementing the action plan

    2. CDC/ATSDR CIO Work Group - provides a forum for developing operational plans to implement CDC/ATSDR's role in the global/national plan for workforce development; facilitates CDC/ATSDR-wide communications/participation. (Appendix D)

Objective 7B: Establish evaluation and system performance monitoring at each of the following levels: individual learner, programmatic and public health outcomes.

Action Item 7B-1: By 2001, the Steering Committee in collaboration with partners will articulate an evaluation framework and monitoring system for the implementation plan.

Objective 7C: Develop/implement a communications and dissemination strategy for the implementation plan.

The communications plan should achieve the following goals:

1. Develop/sustain a common vision by all partners.

2. Promote collaboration and efficient use of resources among partners.

3. Assure comprehensive (broad) dissemination of products and services.

Action Item 7C-1: By (DATE), establish a communications work group within the governance structure to develop a dissemination plan.

Action Item 7C-2: Continue to disseminate information about planned actions through the ASTHO-led Public Health Workforce Development Collaborative (Appendix F), and other partners in the learning system.

Action Item 7C-3: By November 2001, finalize and disseminate all key reports derived from the November 2000 Expert Panel Workshop (i.e., proceedings).

Figure 1. CDC/ATSDR Strategic Elements for Public Health Workforce Development

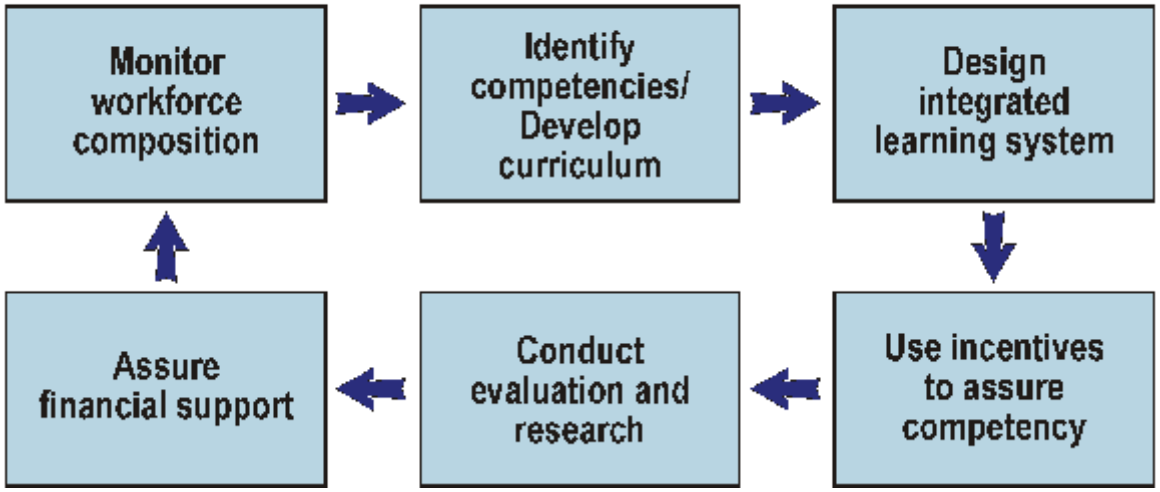

TABLE 1. A GLOBAL AND NATIONAL IMPLEMENTATION PLAN FOR PUBLIC HEALTH WORKFORCE DEVELOPMENT - AT A GLANCE

VISION	GOAL	GUIDING PRINCIPLES	KEY PLANNING ASSUMPTIONS:	DEFINITIONS
A global learning enterprise for public health practitioners: -founded in sound science -provides access to master teachers -facilitated by learner-oriented information technology -integrated into existing learning and practice settings	-frontline public health workers prepared to respond to current and emerging health threats	-builds on existing resources -focuses on needs of frontline -enhances collaboration and partnerships -science-based -strengthens competency, certification and credentialing systems	-new competencies are required for 21st century practice -diverse, multi sector, geographically dispersed workforce -essential services defines work of public health -increased access to/use of technology	Public health workforce- perform one or more of the essential public health services regardless of practice setting. Context-plan addresses CDC/ATSDR role in collaboration with partners in addressing needs of public health workforce

Monitor workforce composition /project needs	Identify competencies/ develop curriculum	Design an integrated learning system	Use incentives to assure competency	Conduct evaluation and research	Assure financial support	Establish coordination and accountability
1A-Develop action plan to enumerate public health workforce periodically	2A-Establish a national system of Centers for Public Health Preparedness	3A-Build capacity for technology-based learning at federal,state and local levels	4A-Develop a multiple pathway framework for certification and credentialing in public health	5A-Develop research agenda and methods to address workforce development issues	6A-Secure a funding base for federal, state and local workforce development activities	Establish governance structure for implementation of global/national plan
1B-Promote consistent use of public health workforce terminology in data collection	2B-Develop and disseminate curriculum models and learning resources based on core public health competencies	3B-Establish standards, guidelines, and governance structure to enhance integrated global/national operations	4B-Develop strategies which promote life-long learning behaviors and eliminate obstacles.	5B-Integrate evaluation strategies in key workforce activities, (e.g. Public Health Training Network and Centers for Public Health Preparedness)	6B-Implement the CDC/HRSA Memorandum of Understanding on PH Workforce Development	Establish evaluation and system performance monitoring at each level: -individual learning; -programmatic; -public health outcome

1C-Analyze available data sources for trends and developmental needs	2C-Identify factors which support adoption/use of competency-based curricula in public health agencies	3C-Develop communications and marketing strategy to accelerate use (global & nat'l)of technology-supported learning in public health	4C-Identify factors which promote linkages between workforce competency and organizational performance	5C-Promote development and evaluation of practice-focused curricula in Schools of Public Health and related academic programs	6C-Link workforce development strategies with implementation of "Frist-Kennedy Infrastructure Law"	Develop/implement communications and dissemination strategy

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APPENDICES

Appendix A:
Historical Perspective on Public Health Workforce Development Initiatives

Appendix B:
Core Public Health Competencies - (Draft) - Council on Linkages Between Academia and Practice, 2001)

Appendix C:
Composition of Expert Panel on Public Health Workforce Development; Callaway Gardens, November, 2000

Appendix D:
Membership of CDC/ATSDR Work Group for Public Health Workforce Development

Appendix E:
Centers for Public Health Preparedness Fact Sheet

Appendix F:

Public Health Workforce Development Collaborative: Inventory of Workforce Programs 1999 - 2000 (For a copy of the inventory, or additional details on the collaborative, contact Jacalyn Bryan, Deputy Director for Policy and Programs, Association of State and Territorial Health Officials, (202) 371-9090.)